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SOME SURGICAL TECHNIQUES *

BY

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1.—THE KIRSCHNER-EHMER SPLINT

To-day, as a result of the introduction of the sulpha drugs, the antibiotics and metals which are inert in body tissues, open reduction and the internal fixation of fractures has become an established practice. The methods that have gained great popularity of recent years in veterinary practice are the use of the Stadar splint, the Kirschner-Ehmer splint and intramedullary pinning. The Stadar splint was the forerunner of the Kirschner-Ehmer splint. The principle of them both is essentially the same, but, as in my opinion the Kirschner-Ehmer splint has several advantages over the former, I have chosen it for discussion.

Our aim in the treatment of fractures should be to reduce, align, and immobilise, and at the same time permit maximum use of the limb to assist healing and prevent muscle atrophy. Therefore, I think it will be convenient to discuss the Kirschner-Ehmer splint in this light and see what it has to offer us in attaining these objectives.

REDUCTION

The chief difficulty encountered when attempting to reduce a fracture by manual traction is that the skin is stretched, the muscles often are torn and little movement of the bone results. This is especially applicable to fractures of the femur and humerus.

Much assistance can be obtained in effecting reduction by the use of the Gordon extender (see Fig. 1a). The top curved portion of the extender is suitably padded and placed in the groin or axilla of the sound leg. It is then attached to the sound leg by fixing a length of bandage or cord above either the hock or wrist and passing the end through the hole in the traction plate and fastening it to the special cleat.

The injured leg is then fastened in like manner to the moveable hook on the extender and traction obtained by turning the nut on the traction hook. Traction should be applied slowly and at intervals. If the degree of extension required cannot be obtained immediately then one must wait and give the muscles time to relax. If left under tension the muscles will usually relax within 20 to 45 minutes.

If reduction cannot be obtained by this method then one may use the special traction tongs (see Fig. 1b). These tongs are designed to give direct skeletal traction rather than through a joint, such as is obtained when the extender is used alone. The pins on the traction tongs are pressed through the skin and into the bone on the lateral-medial surface, at the distal end of the fractured bone, care being taken not to injure the joint. Once the tongs are in position they are attached, by a length of cord or bandage, to the hook on the extender.

The greater the traction applied the more firmly will the pins become fixed in the bone and the less will be the chance of their slipping out.

Once satisfactory reduction is obtained the bones are aligned, as far as possible, by manual manipulation.

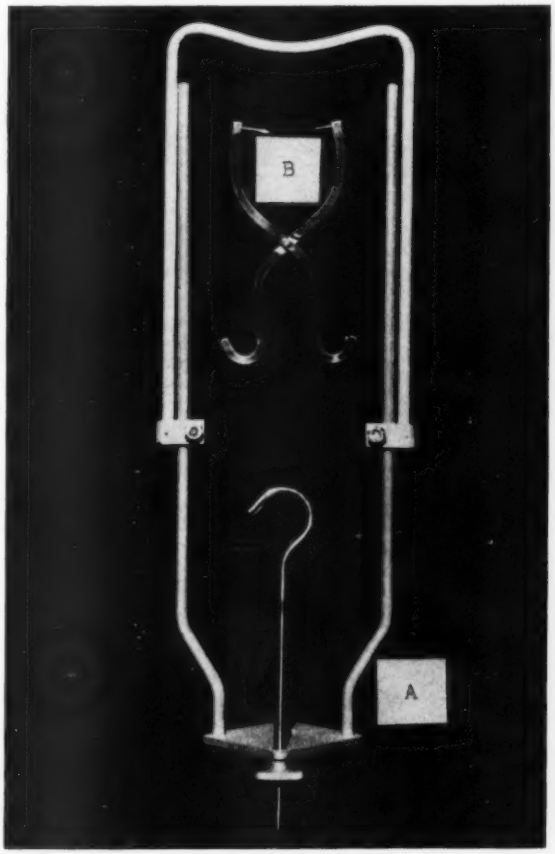

*FIG. 1.
A—Gordon Extender. B—Traction Tongs.

ALIGNMENT

If satisfactory alignment cannot be obtained manually then the fragments may be manipulated further using the Ehmer reduction gear. Since this apparatus cannot be used until the pins have been inserted it will be convenient at this stage to discuss the components of the Kirschner-Ehmer splint and the insertion of the pins.

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* Figs. 1-7: John Slater, Newmarket.

Pins.—Pins are supplied in three standard lengths, 4½ inches, 4 inches and 2½ inches with diameters of ⅛ inch, 3/32 inch and ·980 inch respectively. They are made of stainless steel and pointed at one end (see Fig. 2a).

Connecting Rods.—These are supplied in eight lengths varying from 2 inches to 10 inches and are all of equal diameter (see Fig. 2b), with the exception of three extra-fine rods for using with the smallest pins and clamps.

Clamps.—There are two varieties, single and double (see Fig. 2c and d). The single clamps are used, in conjunction with a short connecting rod, to join two pins together and form what is known as a "pin assembly." The double clamps are used to join two pin assemblies together through the medium of a long connecting rod.

The rest of the Kirschner-Ehmer equipment consists of a pin drill or chuck and two types of spanners (see Fig. 3).

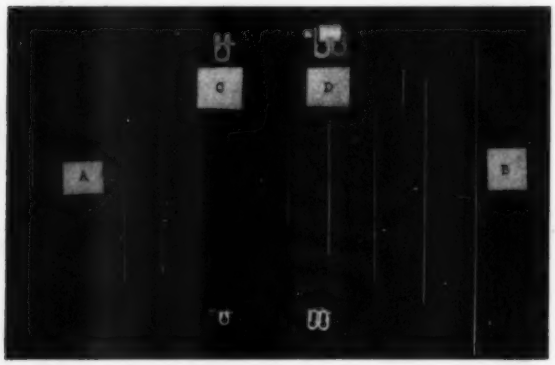

Fig. 2.
A—Stainless Steel Pins. C—Single Clamp.
B—Connecting Rods. D—Double Clamp.

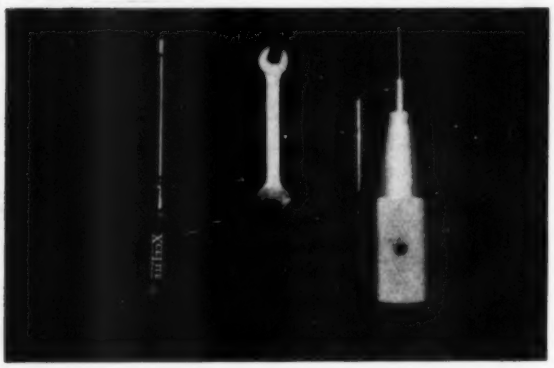

Fig. 3.

Method of Inserting Pins.—Insert the pin into the drill until only about 1 inch protrudes. This is necessary to prevent pin wobble and over penetration. Either thrust the pin through the skin or make a small stab incision and then probe for the centre of the lateral cortex. The pin is now bored into the bone with a back-and-forth rotary movement of the wrist, and, as the bone is penetrated, the chuck is loosened and slid back to permit the pin to advance.

To prevent the pins from slipping off the bone it is advisable to commence with the pin square to the bone and, when once started, align to the correct angle. It is essential that the pins should be sharp, and, for them to obtain a good hold, they should be inserted at an angle of 45 to 70 degrees and penetrate both cortices (see Fig. 4). Pins should be placed as near as possible to the articulations and if correctly inserted their points on exit should be approximately ¼ inch apart (see Fig. 4).

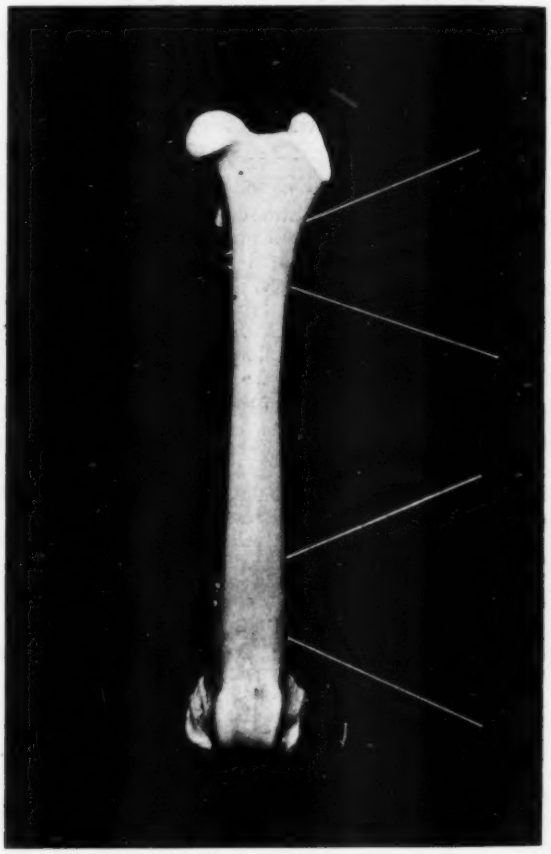

Fig. 4.

Pin Sites.—Two pins are inserted into both the proximal and distal ends of the fractured bone close to the articulation, and with all four pins as nearly as possible in alignment. Pins should be inserted on the lateral aspect of the bone, except in the case of the radius when an antero-lateral positioning is preferable, or, in the case of a bilateral fracture, when one splint must be placed on the anterior surface of one bone to give the animal one side on which to rest.

Having inserted the pins the next step is to join together each pair of pins at both the proximal and distal ends with single clamps and a connecting rod and form what is known as a "pin assembly" (see Fig. 5). The connecting rod should be adjusted to about ¾ inch from the skin and should not protrude more than ¼ to ½ inch beyond the clamps, to prevent interference with X-ray examination of the fracture site.

At this stage, if necessary, final reduction and alignment may be obtained by using the Ehmer reduction gear.

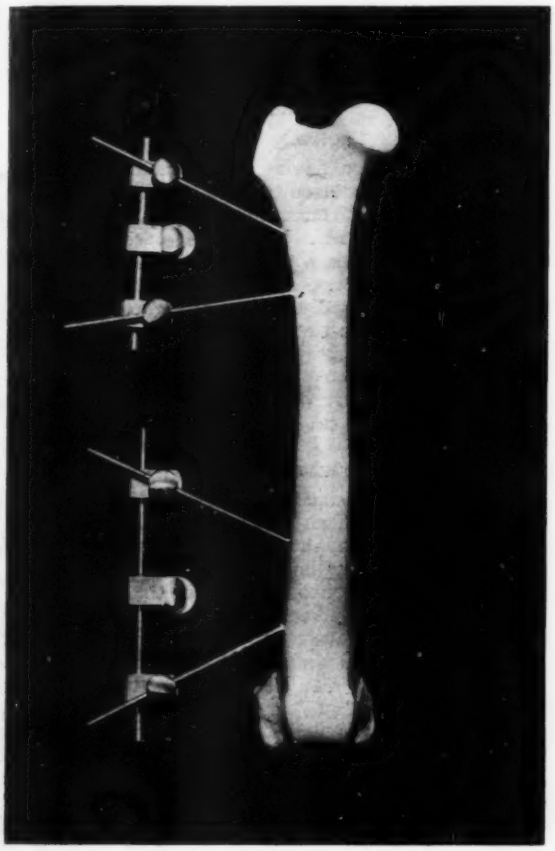

Fig. 5.

Use of the Ehmer Reduction Gear

The jaws of the reduction gear are clamped to the connecting rod of each pin assembly as near as possible to the ends of the bone (see Fig. 6). By turning the coloured nuts on the reduction gear the fragments may be manipulated as follows:—

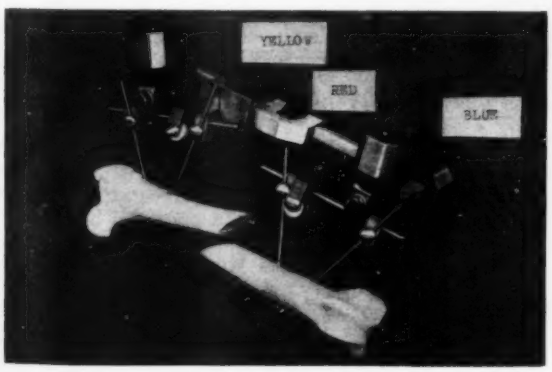

Fig. 6.

Red—Extension.
Yellow—Medial and Lateral Movement.
Blue—Anterior and Posterior Movement.

Nut	*Movement Obtained*
RED ...	... Extension.
YELLOW ...	... Medial and Lateral.
BLUE ...	... Anterior and Posterior.

Unless some tissue is interposed between the fragments accurate alignment may be obtained. However, use of the gear is not necessary in each and every case as satisfactory alignment can generally be obtained by manual manipulations. After alignment has been obtained it is advisable to reduce the degree of extension to permit the bones to fit snugly together.

Immobilisation

This is obtained by joining the double clamps on the pin assemblies together, with a single connecting rod (see Fig. 7). Then tighten all nuts on all clamps and remove the reduction gear.

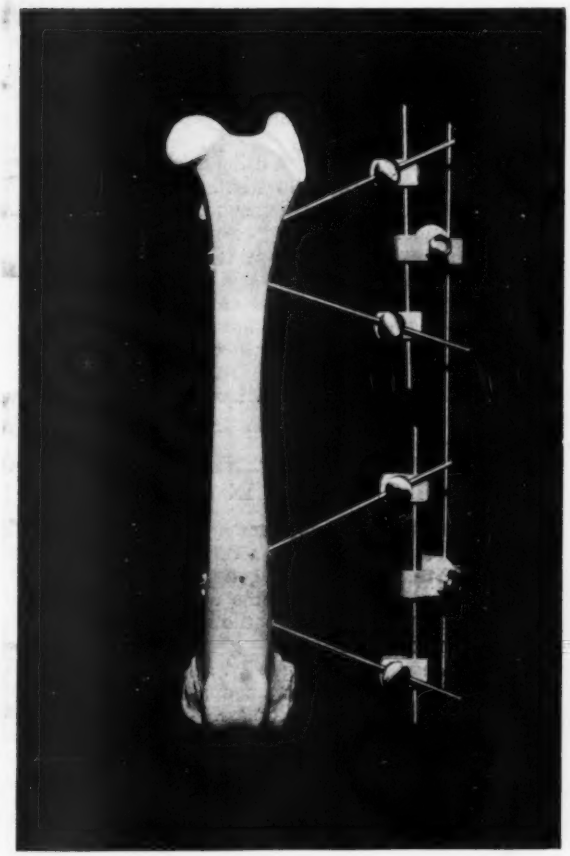

Fig. 7.

After-treatment

It is customary to place either some powder of one of the sulpha drugs or penicillin cream around each pin wound. A discharge usually forms around the pins and dries, forming a good protective crust. No other dressings are necessary.

The temperature should be taken twice daily and if it rises over 102° F. then a three- or four-day course of penicillin is recommended.

Advantages

(i) The fracture is reduced, aligned and immobilised by a mechanical metal splint, whereby two metal pins are inserted into the shaft of the bone, on either side of the fracture, and held together by a supporting rod.

(ii) There is immobilisation at the site of the fracture.

(iii) The splint, being metal, is not readily tampered with and is light, weighing only 3 to 4 oz.

(iv) There is free access for dressing wounds and therefore this method lends itself to those cases in which there is gross soft tissue damage.

(v) Little after-treatment is required.

(vi) The degree of healing can be satisfactorily tested and corrections made, if necessary, simply by loosening the fixation rod and tightening up again.

(vii) The pins are removed after healing is complete in three to four weeks, without an anaesthetic, simply by removing the connecting rods, applying the chuck and gently rotating them outwards.

I have attempted to give you a general idea of the components of the Kirschner-Ehmer splint and the technique of its use without dealing with its special application for specific fractures.

I need hardly say that when using this splint every care and attention must be paid to sterilisation and an aseptic technique. The area of operation should be prepared in the customary manner by clipping, sterilising the skin and draping. To permit the surgeon to manipulate the limb during the operation without breaking his aseptic technique it is a good plan to place the entire limb in a sterile stockinet before applying the drapes.

The operation of pinning should be performed under a general anaesthetic and X-ray pictures taken before and after the operation, in both antero-posterior and lateral planes.

2.—A TECHNIQUE FOR OPENING AND CLOSING THE THORAX IN DOGS

During recent years it has become popular to obtain the necessary exposure for repair of a ruptured diaphragm and for removal of foreign bodies lodged in the thoracic portion of the oesophagus by opening the chest. It is therefore considered justifiable to discuss the technique of, opening and closing the thorax in dogs.

The mediastinum in the dog is a very thin structure and, if pneumothorax is performed on one side, the collapsing lung tears the mediastinum and results in collapse of the other lung. In fact, for practical purposes the dog has only one chest. It is for this reason that a positive pressure apparatus is essential for performing canine intrathoracic surgery. When using such an apparatus care must be taken to ensure that the lungs are not over inflated and that they are inflated 15 to 25 times per minute, thus approximating, as nearly as possible, to the normal rate of respiration.

To obtain satisfactory exposure of the chest wall the dog must be restrained on his side with his forelegs drawn well forward. In addition, if the dog is restrained on a flat table his chest will lie at an angle, thus increasing the difficulties of operative procedures. This may be overcome by either placing the dog on a special rack or by packing under the sternum.

The most suitable intercostal space through which to enter the chest will depend on the operation to be performed. Generally the fourth or fifth intercostal space for oesophageal obstructions and the seventh intercostal space for rupture of the diaphragm will be found satisfactory.

Technique

A. Opening the Thorax

The site of incision having been suitably prepared and draped an incision is made through the skin and subcutaneous tissues. The individual muscle layers are next divided down to the intercostals. Finally the chest is entered by incising the intercostals with a scalpel. To prevent injury to the lung and the intercostal vessels the incision should be made during expiration and well clear of the posterior border of the rib. Adequate exposure may now be obtained by inserting a self-retaining retractor.

It is quite unnecessary to resect a rib ; the ribs may be retracted sufficiently by this method to gain access to any organ in the thoracic cavity.

B. Closing the Thorax

The ribs are approximated by three or four strong linen or cotton sutures. Each suture encircles the ribs and is passed through pleura, intercostal muscles and fascia. As each suture is placed, the ends are left long and held in a haemostat pending approximation of the ribs.

The ribs may be conveniently approximated by the use of one or two Backhaus towel clips. The sutures already placed are then tied and the Backhaus clips removed. Considerable tension may be necessary to bring the ribs into normal position, and care must be taken not to apply excessive tension, which will result in the ribs overlapping.

Starting at the upper limit of the incision, bring the edges of the external oblique muscle together with a continuous chromic catgut suture and include in this suture as much of the intercostal muscle that it is possible to pick up. It is not possible to pick up the pleura.

When the lower limit of the incision is reached, and before tying off the suture, all air must be expelled from the chest cavity. This is effected by fully expanding the lung, and when the lung is seen to be filling the chest cavity the final suture is quickly tightened and tied. The dog should now be able to breathe without the assistance of artificial respiration.

The remaining muscle layers are brought into apposition with continuous catgut sutures. The skin incision is approximated by inserting a subcuticular continuous suture and final closure obtained by either interrupted nylon sutures or by a continuous silk suture which does not transfix but only passes through the superficial layers.

3.—BLOOD VESSEL SURGERY

Introduction

The repair or anastomosis of blood vessels is rarely practised in veterinary surgery. Badly damaged blood vessels are ligated and it is hoped that a collateral blood supply will be established.

However, it is advisable to know the principles underlying blood vessel surgery and the techniques employed so that should the necessity arise, closure or the anastomosis of a blood vessel may be performed.

Difficulties Encountered

The chief difficulty to overcome is thrombus formation. This occurs most frequently at the suture line and prevents the re-establishment of the blood flow. To determine what

methods to apply to overcome this difficulty, one has to consider the interferences which precipitate clotting.

It must not be forgotten that both the adventitia and intima of blood vessels are rich in thrombo-plastic substances which are liberated if these structures are damaged and that blood platelets cling to damaged areas of the intima and to suture material with resulting thrombus formation.

How These Difficulties May be Overcome

Reduce trauma to the blood vessel wall to a minimum by gentle handling, the use of rubber-shod clamps and atraumatic needles. Strip the adventitia and thereby remove the thromboplastic materials from the area of trauma and finally prevent the adherence of platelets by using waxed cotton or linen suture material.

Techniques

A. Closing an Incised or Torn Vessel

Adequately expose the vessel and control haemorrhage by placing rubber-shod Diffenbach forceps on either side of the incision, taking care not to injure the intima. Remove all blood clots by flushing with N/Saline or Heparin solution (1/1,000 in N/Saline), and clean out the vessel with small pledgets of cotton wool soaked in one or other of these solutions.

Next remove the adventitia by blunt dissection, using fine-pointed scissors, and then close the incision with either single interrupted or mattress sutures passing through all coats.

Finally, re-establish blood flow by first releasing the clamp distal to the heart, and then very gradually release the clamp on the cardiac side, so that blood flow through the repaired area is not complete for at least one minute. Should any leakage occur this may be controlled by the insertion of additional interrupted sutures.

B. End-to-end Anastomosis

First Method

Having clamped and cleaned the vessels, as already described, resect the adventitia. This may best be accomplished by pulling it over the end of the vessel and cutting it off with scissors. The adventitia retracts and leaves the end of the blood vessel completely free.

The basis of this method of end-to-end anastomosis is the insertion of three guy sutures which convert the ends of the vessels into equilateral triangles (see Fig. 8). These guy sutures are passed through all layers of the vessel wall and tied. At this stage an assistant is required to hold and tense two of the guy sutures whilst the surgeon tensing the remaining suture closes one side of the triangle with a continuous suture through all layers (see Fig. 9). Each suture should be placed about 1 m.m. apart. It is most convenient to sew towards the guy suture being held and, when one side of the triangle has been completed, to tie off. The remaining two sides are then completed in like manner.

Second Method

The anastomosis is made using a continuous mattress suture. Having approximated the ends of the vessels commence suturing at the lowest commissure, leaving one end long and attached to a haemostat (see Fig. 10).

When the upper commissure is reached roll the vessel over and continue suturing down the other side until the anastomosis is complete, and tie off.

This method makes a very effective means of anastomosis. It brings intima to intima and everts the edges of the vessel.

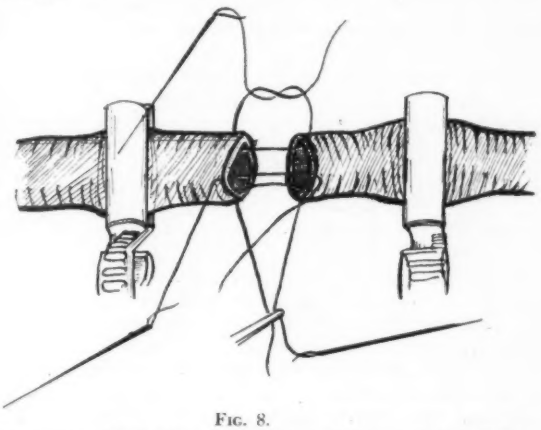

Fig. 8.

Redrawn from Markowitz, "Experimental Surgery," 2nd Edition, 1949, published by The Williams and Wilkins Company, Baltimore, U.S.A.

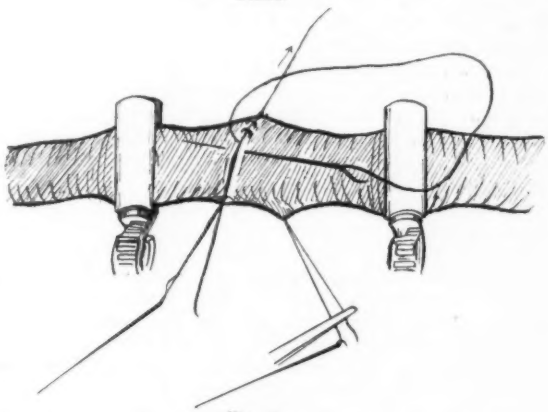

Fig. 9.

Redrawn from Markowitz, "Experimental Surgery," 2nd Edition, 1949, published by The Williams and Wilkins Company, Baltimore, U.S.A.

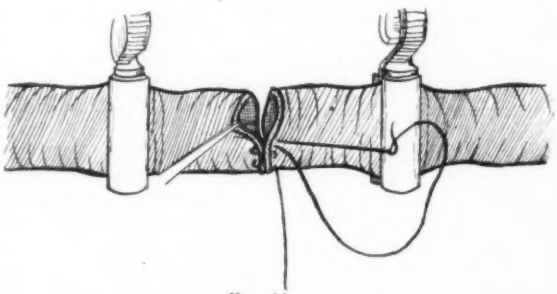

Fig. 10.

Redrawn, slightly modified, from Gross, "Surgical Treatment of Abnormalities of the Heart and Great Vessels," 1947, published by Charles C. Thomas, Illinois, U.S.A.

4.—INTESTINAL ANASTOMOSIS IN THE DOG

The indications in canine practice necessitating intestinal anastomosis are rare. However, occasions do occur when this operation is desirable and may profitably be performed.

I do not intend to describe the various conditions which

occur in the dog requiring this operation but rather to discuss the underlying principles and the techniques for effecting an intestinal anastomosis.

In general, the chief difficulties encountered when performing intestinal anastomosis in the dog may be summarised as follows:—

(i) The smallness of the dog's intestine.

(ii) Spasm of the intestine during surgery, which makes suturing difficult.

(iii) The high bacterial flora of the intestinal contents.

(iv) The difficulty of joining a dilated to a constricted portion of intestine, such as occurs following an obstruction.

Before considering the actual details of the techniques employed it may be profitable to consider the histology of the small intestine and see if we can develop from it a sound foundation on which to build a safe and secure technique for performing an intestinal anastomosis.

The intestine is made up of four distinct structures.

Firstly, The Serous Coat.—This is a reflection of the peritoneum and surrounds the intestine. The importance of this structure lies in the part it has to play in the process of healing. Intestine does not heal along the edge of the incision like other structures but by the adhesion of the inverted serous coat.

Secondly, Muscular Layer.—This is composed of a longitudinal and circular layer of smooth muscle fibres. The force with which these muscles can propel ingesta along the canine intestine is very considerable and may result in the breakdown of the suture line with leakage of ingesta into the peritoneal cavity.

Thirdly, Submucosa.—This is composed of loose connective tissue and in it the blood vessels and lacteals ramify. Connective tissues may be described as the framework of the body and its great adjunct to surgery is that it holds sutures. The submucosa is the only structure in the wall of the intestine which can give the necessary support to sutures and permit the serosa to be brought into apposition and held there, against the strains imposed upon it by peristaltic action, during the process of healing.

Fourthly, Mucosa.—The mucosa completely surrounds the lumen of the intestine and is in contact with the ingesta. Therefore, immediately this structure is incised contamination will result unless a very careful and systematic method of packing off, swabbing and discarding contaminated instruments is practised.

It will be appreciated from these remarks that the function and structure of each histological layer of the intestine has to be taken into consideration when performing an intestinal anastomosis.

Unless serosa is brought into apposition with serosa healing will not occur, ingesta will escape and a peritonitis develop. The suture material must pass through the connective tissue layer to obtain sufficient hold to maintain the edges in apposition during healing. The powerful peristaltic waves of the muscular coat must be appreciated and overcome to prevent a breakdown of the suture line. Finally, the mucosa is the last barrier against contamination from the bacteria of the intestinal contents.

Numerous methods have been advocated and practised for joining together the intestines following a resection. They may either be joined together by an end-to-end anastomosis or by a lateral anastomosis.

The methods I intend to describe are those with which I am most conversant, which to the best of my belief have stood the test of time, and which I have no hesitation in recommending as the most simple and satisfactory methods for performing intestinal anastomosis in the dog.

Adequately to cover the technique of intestinal anastomosis it is proposed to describe (A) Resection of a length of intestine, (B) End-to-end anastomosis, and (C) Lateral anastomosis.

A. Resection

Having exposed and packed off the loop of intestine, the blood vessels supplying the portion to be resected are ligated and the mesentery severed. When planning the site at which to ligate the blood vessels, proximal and distal to the loop to be resected, care must be taken to ensure that the ends of the intestine to be anastomosed have an adequate blood supply.

Two intestinal clamps are now placed across the intestine at each end of the portion to be resected. The proximity of the clamps will depend on whether an end-to-end or lateral anastomosis is being performed. For a lateral anastomosis the clamps should be placed close together but for an end-to-end anastomosis they should be placed at least 1 inch apart and before applying them the intestinal contents should be gently squeezed into the portion to be resected.

The intestinal clamps should be applied with just sufficient pressure to occlude the lumen of the intestine and to prevent the escape of ingesta. In addition, the clamp on the portion to be resected should be placed as close as possible to the ligature occluding the blood vessel on the mesenteric border of the intestine.

Finally, after additional packing off, the intestine is resected by cutting between the clamps with a scalpel, the resected portion discarded, and the exposed ends immediately cleaned with swabs attached to a haemostat.

B. End-to-end Anastomosis

This type of anastomosis may be more easily and quickly performed than a lateral anastomosis but has several distinct disadvantages. The chief difficulty is to invert sufficient of the serosa without constricting the lumen and inducing a stenosis with subsequent obstruction. This is particularly so in dogs weighing under 20 lb. Also, the mucosa protrudes making suturing and inversion of the serosa difficult. This may best be overcome by clipping off the protruding mucosa, using scissors, until it has receded well below the level of the serosa. Haemorrhage results, but is of little or no consequence.

Technique

The ends of the intestines are aligned with either stay sutures or Allis forceps and united with a Connell suture. A single length of suture material is employed with a needle attached at each end.

The intestines are joined initially by a single mattress suture which is passed through all coats and tied (see Fig. 11). Then a continuous mattress suture is made in opposite directions, with each needle, until the angles are reached. At this stage half the circumference of each intestine will have been united, with serosa to serosa. The next step is to invert the remaining portion of the intestine by continuing with the same type of suture. When the angle is reached the needle is passed from within out, and then taken to the other side and passed from without in, and then on the same side, from within out before transferring to the original side when a similar stitch is performed (see Fig. 12). As each suture is pulled taut it is necessary to invert the serosa with the assistance of forceps. Suturing

in this manner is continued with each needle until they meet when the suture is tied and cut off short.

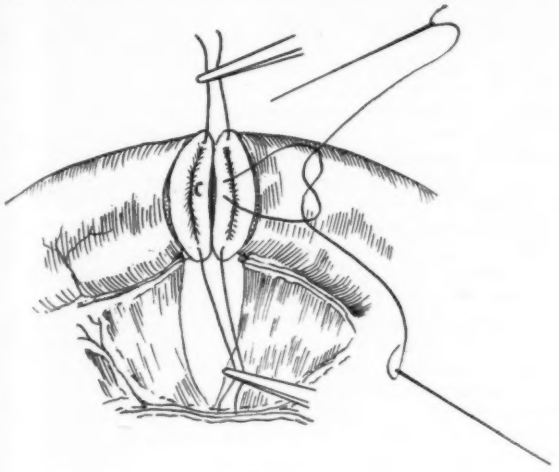

Fig. 11.

Redrawn from Markowitz, "Experimental Surgery," 2nd Edition, 1949, published by The Williams and Wilkins Company, Baltimore, U.S.A.

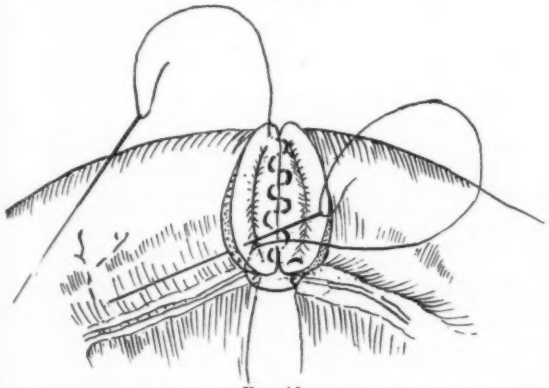

Fig. 12.

Redrawn from Markowitz, "Experimental Surgery," 2nd Edition, 1949, published by The Williams and Wilkins Company, Baltimore, U.S.A.

At this stage all soiled drapes, swabs and instruments are discarded and hands washed before, as is customary, the suture line is reinforced with a continuous suture. This is not always necessary or advisable as it further decreases the size of the lumen at the point of anastomosis. When placing these sutures care must be taken not to pull them too tight as this may result in pressure necrosis with subsequent breakdown of the suture line and escape of intestinal contents.

Finally, the mesentery, which is a delicate structure and tears easily, is joined. In fact, it is questionable whether or not closure of the mesentery is advisable because, in attempting repair, small blood vessels are included in the suture which adversely affects the blood supply at the site of anastomosis.

C. Lateral Anastomosis

Generally speaking, lateral anastomosis is a more satisfactory method for restoring the continuity of the intestines in spite of taking more time and increasing the chances of contamination by exposing a larger area of mucosa.

Having resected a portion of the intestine in the manner already described, the first step is to close the ends of the intestine. Care must be taken to ensure that the mucosa and the serosa are sufficiently inverted and securely held to withstand the powerful muscular contractions. Both the following methods give equally satisfactory results.

Method A.—A continuous mattress suture is placed through the entire intestine beneath the clamp. It is convenient to start under the tip of the clamp, leaving the end of the suture material long, proceed across the width of the intestine, and back again to the starting point and tie off. Remove the clamp and invert the crushed edge with either a continuous mattress or Lembert suture (see Fig. 13).

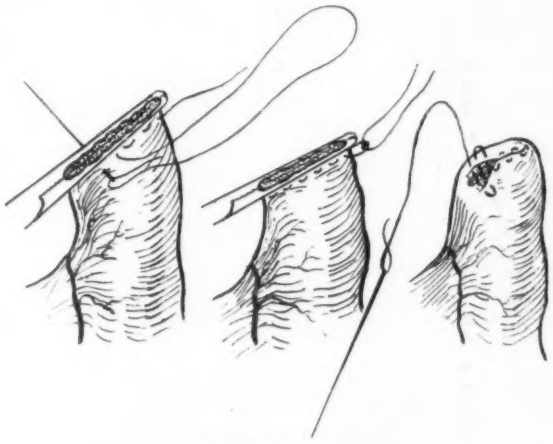

Fig. 13.

Redrawn from Mann & Schlotthauer, Abdominal Surgery in the Dog. *Veterinary Medicine*. **29.** 1934.

Method B.—Oversew the clamp with a continuous suture parallel to the edge of the clamp, leaving the end of the suture material long. When the end is reached, loosen and withdraw the clamp and at the same time pull gently on both ends of the suture. This results in the edges being inverted. Usually, to obtain a good even inversion, the edges require to be pushed inwards with forceps. Care must be taken not to draw the suture line too tight as it easily cuts through and may result in a leakage. This suture line is now reinforced by suturing back to the starting point with a continuous Lembert and tying off (see Fig. 14 *overleaf*).

Having closed the ends of the intestine, the next step is to make the anastomosis. The intestines are placed parallel to each other and iso-peristaltic. It is customary to overlap them to a distance equal to three times their diameter. The overlapping portions of intestine are now retained in position by placing a continuous suture, close to the mesenteric border, which should not include too many of the small blood vessels. This suture is tied at its beginning and an end left long and secured with a lock stitch at its completion. This suture serves two purposes. Firstly it holds the intestines in position and secondly seals the inferior side of the anastomosis.

Next, to open the intestines. This is best performed with sharp-pointed scissors and the incision should be continued right up to the suture closing the ends. This eliminates the blind ends of intestine and the possibility of bones, etc.,

becoming lodged there and necrosing through. These incisions should measure approximately twice the diameter of the intestine and must be equal in length.

Having paid the necessary attention to packing off and carefully cleaned the exposed mucosa, the anastomosis is performed using a continuous Connell suture in exactly the same manner as described for an end-to-end anastomosis (see Fig. 15). The advantage of commencing the suture in the middle of the inferior wall is that the final closure and knot is made in the middle and not at an extremity, which is the most difficult part to close and most liable to leakage (see Fig. 16).

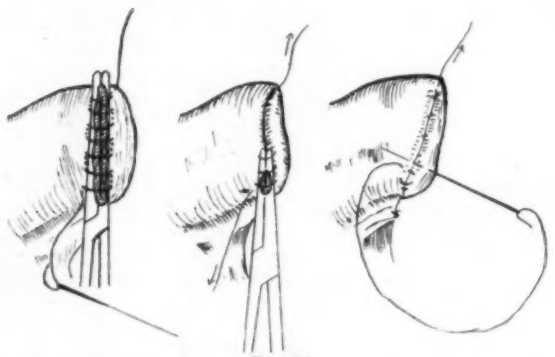

Fig. 14.
Redrawn from Markowitz, "Experimental Surgery," 2nd Edition, 1949, published by The Williams and Wilkins Company, Baltimore, U.S.A.

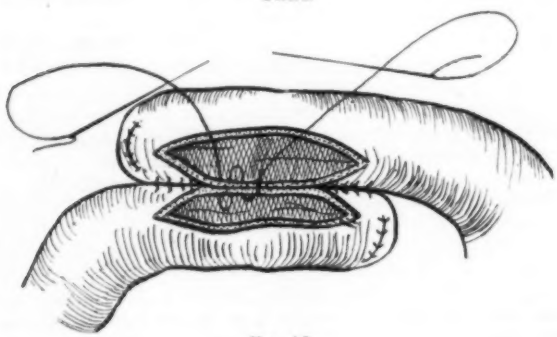

Fig. 15.
Redrawn from Mann & Schlotthauer, Abdominal Surgery in the Dog. *Veterinary Medicine*. **29.** 1934.

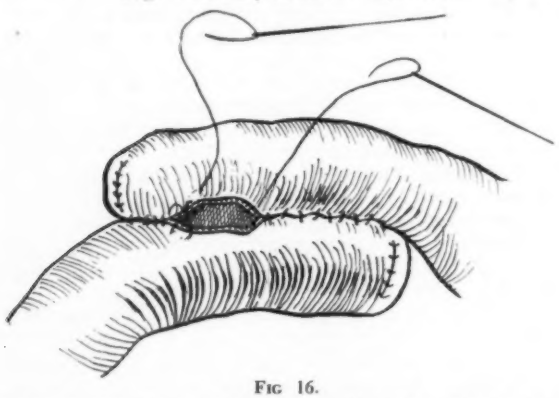

Fig 16.
Redrawn from Mann & Schlotthauer, Abdominal Surgery in the Dog. *Veterinary Medicine*. **29.** 1934.

Finally, having removed all contaminated swabs, etc., the superior suture line is reinforced by continuing the suture, which was first placed along the mesenteric border, back along the superior border to its starting point and tying off. This now completes the anastomosis which is joined by two rows of sutures.

The question is often asked, at what distance apart should stitches be placed? Generally it will be found that sutures are placed about 3 m.m. apart, but a satisfactory rule is to say that the distance apart the stitches are placed should be equal to the distance they are placed from the line of incision.

Atraumatic needles should be used for all intestinal work and the straight variety will be found the most suitable for the majority of procedures. The type of suture material to be used needs little comment. Satisfactory results may be obtained with catgut, linen or cotton. Chromic catgut is the type most universally employed as plain catgut is liable to break down too rapidly.

Acknowledgments.—I wish to thank Miss V. R. Jarvis for copying the pen drawings and Mr. John Slater, photographer, Newmarket, for the photographs illustrating the Kirschner-Ehmer splinting apparatus.

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PROGENY TESTING OF DAIRY BULLS

As intimated recently in these columns, a new plan to progeny test dairy bulls on a national scale is to be put into limited operation by the Milk Marketing Board this autumn. Yearling bulls will be tested under farm conditions in carefully chosen "bull-proving" herds.

Teams of bulls of any breed on test at a centre will be used at random in the proving herds of the area concerned, until each has had enough inseminations to obtain the number of daughters reckoned to be necessary to make the test fair (probably about 20). The bulls will later be assessed by direct comparison of the daughter's yields. It is believed that a sufficiently large number of daughters will make this technique—which has not yet been tried in any country—satisfactory, without having to resort to building expensive testing stations with standard management, or having to apply complicated correction factors to yields obtained on farms, in order to compensate for management differences between the herds.

Pilot schemes have already been in operation from the Cheswardine and Tarporley centres, and the testing of some 50 to 75 bulls will be put in hand in the autumn

The plan has been submitted to the Board's Panel of Honorary Consultants, and general comment on it from the experts in many countries has been entirely favourable.

* * * * *

EXPORT OF CATTLE SEMEN OPPOSED

The Edinburgh correspondent of *The Times*, in a message dated May 3rd, writes: "Asked by the Ministry of Agriculture for their views on international trade in cattle semen, the directors of the Royal Highland and Agricultural Society, meeting here to-day, unanimously agreed that it would be a retrograde step and should not be encouraged. A special committee expressed the opinion "that British pedigree cattle stock is generally recognised as the best in the world, and to export semen would mean that in time there would be a reduction in the stock of pedigree sires in this country."

* * * * *

Weekly Wisdom

Chairmanship at its best is a fine art; some men are born chairmen, some achieve greatness; some merely fill the chair.—Alfred Cox: "Among the Doctors."

CLINICAL COMMUNICATIONS

SUPEROVULATION IN THE COW

L. W. FULLER, M.R.C.V.S., Dulverton, Som.

Subject.—Five-year-old Shorthorn cross cow.

History.—Treated for complete anoestrus in the early part of 1949 with one injection of 25 mg. stilboestrol dipropionate intramuscularly. She showed signs of oestrus at the third day and lasting until the tenth day. She was not served and no oestral cycle was established.

On April 15th she received an intramuscular injection of 1,500 units of P.M.S. On April 18th she was in oestrus, was served in error and became pregnant.

On January 6th, 1950, she was parturient and produced in the field a dead calf of about seven and a half months development. This was followed rapidly by a small, fully developed bull calf. The cow and calf were left out until midnight when I was called to attend the calf which was dying from exposure. I examined the cow, found her to be still parturient and removed three more living calves—one bull, one hermaphrodite and one heifer, possibly hermaphrodite.

A quantity of placenta was passed during the night. One large placenta which had apparently accommodated two calves was retained and removed manually at the third day. Slight milk fever occurred during the second day and was treated successfully.

Involution following removal of the placenta was rapid. Progress of the cow and the three calves has been satisfactory.

Summary

A case of superovulation following the use of oestrogens in a cow and leading to the birth of quintuplets is reported. Similar experiences from other practitioners are invited.

* * * * *

THE ISOLATION OF *SALMONELLA TYPHI-MURIUM* FROM THE CARCASE OF A BULLOCK SUBMITTED FOR MEAT INSPECTION

E. J. L. SOULSBY and J. NORVAL,

Public Health Department, City of Edinburgh,

and

J. E. WILSON,

Ministry of Agriculture and Fisheries, Lasswade

The isolation of *S. typhi-murium* from a bovine carcase submitted for meat inspection is considered sufficiently important to warrant attention being drawn to it, in view of the possible danger of human food poisoning.

History.—The subject, a home-bred Friesian bullock two and a half years old, was in good health when brought in from grazing in October, 1949, but commenced scouring about the middle of November. It was removed from the cattle court and isolated in a loose box. Bodily condition was gradually lost and scouring continued with slight intermissions. Hay and silage were eaten readily but concentrates were refused. The animal was examined by the owner's veterinary surgeon in December. Johne's disease was suspected but a faecal examination was negative. An astringent mixture was prescribed and a month later, as there was no improvement in bodily condition, slaughter was advised. This was carried out at the abattoir, (Edinburgh), at the end of January, 1950.

Post-mortem Appearance.—The carcase, which weighed 450 lb., bled well and set normally. There was no evidence of fever. Fat, although scanty, was quite dry. The liver was normal in size, very dark in colour and soft in consistency. A chronic enteritis was present but acid-fast organisms were not demonstrated in scrapings from the bowel.

In spite of the normal appearance of the carcase, the nature of the lesions in the gut and the liver raised doubt as to its safety and it was detained pending the result of a bacteriological examination.

Bacteriological Examination.—The prescapular, popliteal, internal iliac, and hepatic lymph glands were sectioned and the cut surfaces smeared over desoxycholate-citrate-agar (Leifson's) and MacConkey bile salt medium. Plates of the same media were smeared with meat from the sirloin roast and the forequarter. Portions of all of the above material were ground up separately with sterile sand and inoculated into flasks of selenite broth (Leifson's). Subcultures were made 24 hours later on MacConkey bile salt medium. Cultures were also made from bile.

All plates showed growth of a gram-negative motile bacillus with the biochemical and antigenic properties of *S. typhi-murium.*

Blood samples from a number of animals on the farm were negative when tested against *S. typhi-murium,* using an antigen prepared from the strain isolated and also one obtained from the Standards Laboratory.

Summary

A wide-spread carcase infection, probably resulting from a flare up of a latent infection with *S. typhi-murium,* is described.

The absence of marked changes in the carcase and organs could quite easily have resulted in the carcase being passed for food purposes.

The incidence of bovine salmonellosis appears to be increasing and it seems essential that bacteriological facilities should be available at abattoirs.

LABORATORY ANIMALS BUREAU CONGRESS

The Congress of Animal Technicians took place at the Royal Veterinary College, London, on March 30th and 31st, 1950. Over 400 technicians from all parts of Great Britain attended on one or both days.

At the conference on March 30th, the Animal Technicians' Association was formed under the presidency of Dr. A. S. Parkes, sc.d., f.r.s. The Honorary Secretary is Mr. A. E. Mundy, Research Institute, Royal Veterinary College, Royal College Street, London, N.W.1, from whom details of the new Association should be sought.

On March 31st three scientific and technical papers were presented: "Management of small-animal colonies to produce large numbers of litter mates for controlled experiments" by Mr. G. Porter, Chief Technician, Rowett Research Institute, Bucksburn, Aberdeenshire; "The effect of controlled artificial illumination on rat breeding" by Mr. R. A. Hall, Chief Technician, Allen & Hanburys, Ware, Herts, and "Infection in laboratory animals" by Dr. H. J. Parish, Clinical Research Director, Wellcome Research Laboratories, Beckenham, Kent.

On both days a programme of scientific films was presented.

Parties of technicians were taken by coach to the laboratories of Allen & Hanburys, Ware: May & Baker, Dagenham; Glaxo, Greenford; and Wellcome Research, Beckenham, where they saw much of interest and value, and were handsomely entertained.

There was also a Trade Exhibition at which were represented over 30 firms engaged in the manufacture of animal house equipment, materials, appliances and accessories.

Full details of the proceedings of the Congress will be published in the *Journal of the Animal Technicians' Association.*

The Laboratory Animals Bureau will be organising a similar Congress in 1951 in some provincial centre.

ABSTRACTS

[Royal Sanitary Institute Congress, 1949 : Section D (Veterinary Hygiene) : I.—Public Health Aspects of Poultry Disease (Blount, W. P.) ; **II.—Farm Buildings : Relation to Health of Dairy Cows and Milk Production** (Davidson, F.A.]

I.—Following a discussion by the President, Mr. H. T. Matthews, a very comprehensive paper was presented to the Congress by W. P. Blount. The salmonella infections in poultry are discussed at length, stress being laid upon the importance of good hygiene in the control of *S. thompson* infection. A brief reference is made to other bacterial and virus diseases of the present day, such as erysipelothrix infection and psittacosis. Monilia infections in the form of thrush are appearing with increasing regularity at the present time. The inspection of meat and poultry also is surveyed, the dangers of eating affected poultry meat being discussed at length. Blount points out that whilst most poultry are cooked, there is little danger to the human being, but in the process of handling infected carcases, there may be some slight risk. In the lengthy discussion which followed, R. F. Gordon referred to the extreme difficulty encountered in the inspection of poultry carcases, as so much produce reaches the public through unorthodox channels or in small quantities at a time. Later he commented upon the high incidence of salmonella infection in low-grade and cracked eggs as compared with those produced under better conditions and of higher quality. He also drew attention to the fact that the salmonella problem is not so important in connection with poultry meat as in relation to egg products.

II.—This paper by Davidson is a careful and critical survey of the present position relating to the building construction and hygiene entailed in the different systems of keeping cows which are in vogue to-day, and deserves careful attention by those who are apt to be too enthusiastic about the new parlour and bail systems of milking as compared with the older and better tried procedure of keeping cows in byres. Davidson presents strong arguments in favour of the older system and his remarks should be studied carefully. Those who are about to launch out into cow keeping or to change their system would benefit by reflecting on evidence presented in this paper.

N. S. B.

[The above abstract has been prepared from the published proceedings of the 1949 Congress. A preliminary account of this year's Congress appears in our Notes and News columns.—*Editor.*]

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[I.—Chronic Prolapse of Vagina ; II.—Amputation of Prolapsed Uterus. Roberts, S. J. (1949.) *Cornell Vet.* **39.** 433 and 438.]

I.—The author has treated successfully, by mucous membrane resection, four cases of chronic prolapse of the vagina in cows. Under epidural anaesthesia, the mucous membrane to be removed is raised by the injection of procaine, and then trimmed off with scissors. The shape of the resected part is a deep inverted U with the free ends situated about one-quarter distance upwards from the bottom of the vulvar cleft. Suturing is described as " vertical mattress," whereby one dozen sutures to close up the denuded space and to draw the vulvar edges together are inserted. Stainless steel wire is used. They have deep support by two deep mattress sutures of umbilical tape. All sutures are removed in seven to ten days' time.

II.—A novel operation for amputation of an irreplaceable, completely prolapsed uterus of a cow is described. Under epidural anaesthesia, a longitudinal incision was made along the top of the everted organ extending about 15 inches backwards from the cervix and right through the wall. Through the opening the large blood vessels in the broad ligaments were ligatured and divided, and also the ligaments, the central part of which then retracted into the abdominal cavity. Then the vagina was ligatured by a double transfixing ligature of umbilical tape, the prolapsed tissue cut off distal to it, and the stump replaced. Anti-infection and anti-shock treatment was given and, apart from some distress during the first 12 hours, recovery was optimal.

J. E.

REVIEW

[Maladies du Mouton et de La Chèvre. Craplet, C. (1950.) Paris : Vigot Frères ; pp. 138.]

This book appears to have been written for the sheep farmer rather than for the veterinary practitioner or research worker. Its perusal leaves one with the impression that the husbandry of sheep in France must be on more intensive lines than obtains in Great Britain. This impression arises from the emphasis placed on treatment of the individual sheep rather than upon flock treatment.

A good example of the different approach is furnished by the section dealing with trace element deficiencies. This subject, of such great importance in some parts of the world where sheep are kept in large numbers on ranching lines, is dealt with in one paragraph of seven lines which recommends the adding to the drinking water of a small quantity of a solution containing the sulphates of iron, copper and cobalt as an adjunct to normal methods for control of helminth parasites.

Such subjects as obstetrics and castration are dealt with in some detail.

Septicaemia of young lambs, caused by a variety of organisms, and attributed to infection via the umbilicus, is apparently of great importance in France where sheep are housed during part of the year. Its control depends upon disinfection of the houses, frequent changing and spraying of the bedding with antiseptic solutions and the use of polyvalent sera and vaccines. Sulphonamides and penicillin are used in treatment.

An enzootic paraplegia of sucking lambs is described. The cause is unknown but treatment even in advanced cases is simple and successful. The affected lambs are separated from their mothers and fed on cows' milk to which bicarbonate of soda or hexamine has been added.

It is of interest to note that dipping of sheep for scab is not compulsory in France, and the author, citing the successful eradication of this disease from Australia and New Zealand, expresses the opinion that it could be eradicated from France within ten years if dipping was made compulsory. Sarcoptic mange is said to be of little importance as it is easy to treat and only slightly contagious.

Little space is given to diseases peculiar to the goat, but caprine infectious pleuro-pneumonia and goat pox are mentioned briefly.

No mention is made of either Johne's disease or the rickettsial tickborne fever of sheep.

The absence of references and lack of detail concerning the causal organisms of the infectious diseases render the work of little value to the research worker.

The conditions under which sheep are managed in France are so different from this country that British practitioners will not find this book of great value.

IN PARLIAMENT

The Medical Bill

On the committee stage of the above Bill in the House of Lords, on May 4th Lord Shepherd, Captain, Gentlemen-at-Arms, moved a new clause to make it possible for service in a health centre to be counted towards interne periods. The General Medical Council was given power to make regulations to fix the amount of service at such a centre which might so count.

The new clause was read a second time, and added to the Bill.

On Clause 8 (Increase in number of elected members of Council, etc.).

Lord Shepherd moved an amendment to increase the number of elected members of the General Medical Council from nine to eleven, consisting of eight from England and Wales, two from Scotland, and one from Ireland.

The amendment was agreed to.

On Clause 13 (Constitution of Medical Disciplinary Committee), Lord Hacking moved an amendment to increase the number of laymen on the Disciplinary Committee from one to three.

Lord Shepherd said that if Lord Hacking would alter his amendment to allow for two laymen to be appointed the Government would accept it.

On the suggestion of Lord Llewellin it was agreed that the amendment should read "at least two" in order that the Council could appoint more laymen if they wished to do so.

The amendment, as amended, was agreed to.

An amendment by Lord Llewellin to reduce the quorum of the Committee from nine to five was agreed to.

Lord Webb-Johnson moved a new clause to increase from £20 to £500 the penalty imposed by the Medical Act, 1858, on any person falsely pretending to be a registered medical practitioner.

The clause was read a second time and added to the Bill. The Committee stage was concluded.

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QUESTIONS

Horses (Export and Slaughter)

Mrs. Ganley (May 1st) asked the Minister of Food how soon he expects to come to a decision with regard to slaughterhouses for killing horses, as recommended by the Report on Export and Slaughter of Horses.

Mr. Webb: As I told the hon. Member for Lancaster, Heywood and Royton (Mr. Sutcliffe) on April 26th, I am discussing this with my right hon. Friend the Minister of Health.

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Slaughterhouses

Mr. Bossom (May 1st) asked the Minister of Food, since His Majesty's Government are urging farmers to increase their numbers of pigs and cattle, if he will look into the question of providing more adequate slaughtering facilities.

Mr. Webb: The need to limit capital investment makes any extensive programme of building new slaughterhouses out of the question at present, but I am encouraging local authorities to build slaughterhouses in places where present facilities are seriously inadequate and where a new slaughterhouse would obviously fit in with any likely long-term plans.

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Tuberculosis in Cattle: Eradication on an Area Basis

Mr. Hurd (May 3rd) asked the Minister of Agriculture if he can now give details of the proposed scheme for the eradication of tuberculosis in cattle on an area basis.

Mr. T. Williams: Discussions with the farming interests are still in progress and I am not yet able to announce the details of the scheme. I am, however, sending to the hon. Member a memorandum explaining in broad outline the way in which the proposed scheme is likely to operate.

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Sheep Sprays

Mr. Hurd (May 4th) asked the Minister of Agriculture if, in view of the satisfactory experience in Australia of using high pressure sprays in place of baths for dipping sheep, he will amend the Sheep Dipping Regulations to permit farmers in this country to adopt this less laborious method.

The Minister of Agriculture (Mr. Thomas Williams): No, Sir, the Regulations in this country requiring sheep to be dipped relate only to sheep scab, a disease which has not existed in Australia for many years. There is nothing to prevent farmers from using sprays when treating sheep for any condition other than scab: but I am not satisfied that, under our field conditions, the spraying of sheep for scab would be as effective as dipping.

Mr. Hurd: Will the right hon. Gentleman have some experiments carried out by the Agricultural Improvement Council, or some other competent body, so that we may know by another year whether this is a satisfactory and economical method?

Mr. Williams: That is worth thinking about.

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Fowl Pest

Mr. Turton (May 4th) asked the Minister of Agriculture whether, in view of the fact that there has been no outbreak of fowl pest in the county of Yorkshire during the last six months, he will amend the regulations so as to permit adult and growing poultry to be sent from Yorkshire to Scotland and the more northern English counties.

Mr. T. Williams: I regret that I am not yet able to add anything to the reply I gave to the hon. Member for Skipton (Mr. Drayson) on April 27th.

Mr. Turton: In view of the fact that there have been 167 outbreaks of fowl pest in the last six months in Scotland, is not there something wrong with the regulations which allow Scots chicks to go to Yorkshire and no Yorkshire chicks to go to Scotland?

Mr. Williams: If the hon. Member will look at the reply I referred to, he will find that we expect to make a statement shortly.

Mr. S. Silverman: Will my right hon. Friend bear in mind that there is considerable feeling on this question in many of the northern counties, including Lancashire, and could he expedite his investigation?

Mr. Williams: Yes, I am fully aware of that. But there is also very grave anxiety in parts of Lancashire, and other northern counties, about the possibility of widespread outbreaks of fowl pest.

NOTES AND NEWS

Diary of Events

May 17th.—Spring Meeting of the Eastern Counties Division, N.V.M.A., at Colchester (Red Lion Hotel), 2.15 p.m.

May 18th.—Annual Meeting of the Society of Veterinary Practitioners, in the Holborn Restaurant, London, W.C.1, 2.30 p.m.

May 19th.—Annual General Meeting of the Sussex Division, N.V.M.A., at Brighton (Old Ship Hotel), 2.30 p.m.

May 19th.—Meeting of the Biochemical Society, at Cardiff (Biological Institute, Newport Road, 2 p.m.

May 24th.—Meetings of the Editorial Committee, N.V.M.A.: Executive, 1.30 p.m.: Main, 3 p.m.

May 24th.—Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Scottish Regional Group) in the Hannah Dairy Research Institute, Kirkhill, Ayr, 2.30 p.m.

May 25th.—Special Meeting of the South-Eastern Division, N.V.M.A., at Maidstone (Royal Star Hotel), 6.30 p.m.

May 25th.—Meeting of the Herts and Beds Division, N.V.M.A., at Luton (The George Hotel), 7.30 p.m.

May 26th.—Meeting of the Royal Counties Division, N.V.M.A., at Reading (Caversham Bridge Hotel), 2.30 p.m.

May 27th.—Meeting of the Scottish Branch, N.V.M.A., at Stirling (Golden Lion Hotel), 2.15 p.m.

May 27th.—Annual General Meeting of the Society of Women Veterinary Surgeons, at the Royal Veterinary College, N.W.1, 1.30 p.m.

May 30th.—Meeting of the Welsh Branch, N.V.M.A., at Newtown (The Bear Hotel), 2 p.m.

May 31st.—Meeting of the Southern Counties Division, N.V.M.A., with demonstration, at centres near Salisbury. (See Notice.)

June 7th.—**107th Annual General Meeting of the Royal College of Veterinary Surgeons, at the Royal College of Physicians of Ireland, in Dublin, 11.30 a.m.**

June 7th.—Annual General Meeting of Members of the Victoria Veterinary Benevolent Fund, at 10, Red Lion Square, London, W.C.1, 2.30 p.m.

June 8th.—R.A.V.C. Golfing Society, 1950. Meeting, at North Hants Golf Club, Fleet, commencing at 10 a.m.

June 9th.—R.A.V.C. Annual Dinner, Grosvenor House, London.

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R.C.V.S. Examinations

May 15th.—R.C.V.S. Pharmacology, etc., Examination (Revised Syllabus): Written Examination.

May 17th.—R.C.V.S. Pharmacology, etc., Examination (Revised Syllabus): Orals and Practicals (London and Dublin).

June 8th.—R.C.V.S. D.V.S.M. Written Examination commences, at Edinburgh.

June 22nd.—R.C.V.S. Membership Written Examination.

EXPORTATION OF HORSES (MINIMUM VALUES) ORDER

Increase of Values Below which Horses May Not be Exported to Europe

The Minister of Agriculture and Fisheries has made an Order increasing the amounts prescribed by the Exportation of Horses Act, 1937, below which, any heavy draught horse, vanner, mule, jennet or ass may not be exported to the Continent of Europe, unless it is an animal in respect of which a permit signed by one of the Ministry's Officers authorising its shipment has been issued or is a thoroughbred horse certified by the Jockey Club. This was one of the recommendations of the Departmental Committee set up under the Chairmanship of Lord Rosebery to enquire into the trade in horses for export and slaughter. The Order entitled the Exportation of Horses (Minimum Values) Order, 1950, came into operation on May 1st, 1950.

All animals of the above classes, other than those excepted by permit or certificate must be examined prior to shipment by a veterinary officer appointed by the Minister and must be of not less value than £80—for a heavy draught horse, £75—for a vanner, mule or jennet and £10—for an ass.

Copies of the Order may be obtained from His Majesty's Stationery Office.

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PERSONAL

Birth.—Bell.—On April 28th, 1950, to Edith (*née* Sewell), wife of R. Lancelot Bell, M.R.C.V.S., Gretna, Carlisle, a son—James Richard.

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Marriage.—Goodhand—Richards.—On April 12th, 1950, at St. Matthew's church, Borth, Cardiganshire, Ronald H. Goodhand, B.SC., M.R.C.V.S., younger son of the late Mr. and Mrs. C. Goodhand, "Edensor," The Park, Grimsby, Lincolnshire, to Peggie, only daughter of Mr. and Mrs. F. M. Richards, "Glan-Lerry," Borth, Cardiganshire.

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"OPERATION FRIENDSHIP"

Charter Flight Travel Grants to America for European Students

Aware that one of the greatest barriers to interchange of peoples is the lack of sufficient funds, International Research Fund and Student Travel Service (an American organisation) have co-operated in initiating a plan which will make available up to £100,000 in travel grants to European students.

A £36 grant will be made to each European student going to the United States during the summer under the auspices of International Research Fund, provided he is sponsored by an educational, civic, religious, or fraternal organisation.

Standard air fare between London and New York is about £225 return. International Research Fund, acting as representative for Student Travel Service, offers charter flights to students and faculty members, and to young people unaffiliated with an educational institution, for only £92 return.

In addition, International Research Fund will give a limited number of partial and full travel scholarships to people of exceptional qualification.

Full particulars relating to the tentative schedule of charter flights for summer, 1950, rates and regulations, general information and forms of application for participation in "Operation Friendship, 1950," may be obtained from the International Research Fund, Exchange of Persons Division, Holywell, Oxford.

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Scholarship for Study in Spain

The Consejo Superior de Investigaciones Cientificas offers one scholarship to a graduate of a British University for study in Arts or Sciences in Spain during the academic year 1950/51. This scholarship is offered in return for a scholarship to be awarded by the British Council to a Spanish research student nominated by the Consejo Superior.

Application should be made in duplicate on forms which, with full particulars of the scholarship, may be obtained from any British Council office in the United Kingdom, and should be addressed to: The Controller, Education Division, The British Council, 65, Davies Street, London, W.1.

The closing date for submitting applications is May 20th, 1950.

FOOD FROM DOMESTIC LIVESTOCK

National Council Proposed

A permanent National Council for Domestic Food Production is proposed by the Ministry of Agriculture Committee (under the Chairmanship of Mr. George Brown, M.P.,) appointed in November, 1948, to review the arrangements for the organisation of domestic producers of pigs, poultry, rabbits, goats, bees, and vegetables.

The functions of the Council would be to co-ordinate the work of the various national organisations, such as the Small Pig Keepers' Council and the Domestic Poultry Keepers' Council, and to advise on any proposals for Government assistance whether financial or otherwise.

The Committee attaches the greatest importance to the protection afforded poultry and rabbit keepers by the suspension of pre-war restrictions on the keeping of small livestock through the war-time Regulation 62B which has been continued in force.

Model schemes for pig-keeping have already been drawn up by the Small Pig Keepers' Council and these will, the Committee hope, be effective in preventing the banning of pig-keeping in areas where it can be pursued without danger of nuisance.

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SCIENTIFIC AND PRACTICAL CONTRIBUTIONS TO MILK PRODUCTION

Appointment of Thomas Baxter Prize Award Committee

As announced last June, this award, for outstandingly meritorious work in the field of milk production, has been instituted to commemorate the services rendered to producers and the farming industry in general by Sir Thomas Baxter, who retired last year from the chairmanship of the Milk Marketing Board. His name will thus be permanently associated with achievement in the dairy industry for which he did so much. In addition to the trophy itself, the prize carries a Gold Medal and £100, these last two given by *Farmer and Stock-Breeder*.

At a preliminary meeting it was decided to ask Sir Thomas himself to act as Chairman of the Committee which will administer the award. The full Committee is: Sir Thomas Baxter (Chairman), Mr. R. W. Haddon, C.B.E. (Deputy Chairman), Mr. Joseph Edwards, M.SC., Mr. G. N. Gould, M.R.C.V.S., Mr. E. G. E. Griffith, Mr. James Mackintosh, O.B.E., Professor Sir James A. Scott-Watson, C.B.E., and Mr. Alan Ramsay.

The award is to be made not more than once a year and is to recognise both scientific and practical contributions to milk production. Its object is to stimulate positive action and not to reward continuous devotion to the industry, such as in management or administration.

In due course nominations will be invited from societies, associations and other bodies. The trophy will be retained by the winner of the award until another recipient is announced. Only citizens of Great Britain and Northern Ireland are normally eligible, but an outstanding contribution from overseas may be considered for an additional award.

N.F.U. Animal Health Trust Fellowship

Sir Thomas Baxter's services to agriculture, and especially to milk producers, during his 16 years as chairman of the Milk Marketing Board, are to be recognised, further, by the raising of a veterinary research fund by the National Farmers' Union. He is a past-president of the union, and was one of its pioneers.

It is proposed to set up a fellowship under the Animal Health Trust, which hopes to associate the fund with long-term research designed to reduce disease among dairy herds.

The Council of the National Farmers' Union, which opened the fund recently, is seeking contributions from farmers and others associated with the industry.

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STERILITY IN THE BOVINE

Forthcoming Conference at the Lyons Veterinary School

Professor P. Goret, of the National Veterinary School, Lyons, France, requests us, on his behalf and that of his colleagues, to extend a cordial invitation to all British veterinary surgeons who may be able to attend, to participate in the conference to discuss the problem of sterility in the bovine which will be held at the School on June 23rd, 24th and 25th, 1950.

Provisional Programme

Friday 23rd

Morning.—Opening of the Conference.

Professor Jung—General physiology of the genital apparatus of the bovine animal.

Professor Berthelon—Etiological diagnosis of the sterility of the bovine animal.

Afternoon.—Dr. Vicard—Sterility in the bovine animal. The French practitioner's point of view.

Dr. Pellaton—Sterility in the bovine animal. The Swiss practitioner's point of view.

Discussion

Saturday, 24th

Morning.—Professor Brion—General therapeutics of the sterility of the bovine animal.

Dr. X . . .—Comparative pathology. Sterility in the woman.

Afternoon.—General meeting—Meeting of the Order.

General and professional outlooks.

Dr. Labattut—Collective prophylaxis of sterility of the bovine animal.

Discussion

Closure of the Scientific Conference.

Sunday 25th

Morning.—Meeting of the Association of Ex-Students and Friends of the School of Lyons.

Meeting of the Lyons Veterinary Sciences Society on the subject of meat inspection.

Lecturers: Professor Lucam, Dr. Fontenaille.

Noon.—Banquet.

Afternoon.—Dancing and recreation.

Evening.—Annual Show by the Students, followed by a Ball.

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Royal Sanitary Institute Congress

Veterinary Public Health

In due course we shall be reporting in greater detail the proceedings of the Veterinary Section of the above (1950) Congress, held recently at Eastbourne, but by way of preliminary reference some features of a very successful series of meetings may now be noted.

The main Congress was divided into eight sections by subject and four conferences. The attendances exceeded 2,000, and included delegates from over 50 countries, 16 British Government departments and over 900 local authorities. Its President was Lord de la Warr, who in his address spoke with appreciation of the interest in both farming and veterinary problems manifested by sanitary inspectors.

Mr. Harold Burrow, M.R.C.V.S., D.V.S.M., professor of medicine at the Royal Veterinary College, in the course of his presidential address to the Veterinary Section, said that enormous advances had been made in the knowledge of causes of disease in both man and animals during the half century now closing. The task for the future was to make wider use of that knowledge. "We must see that by the time this century ends our work is so organised that every scrap of knowledge is used to the full in the interests of both animal and human health," said Mr. Burrow.

Dealing with meat inspection, Mr. J. C. Greatorex, M.R.C.V.S., also of the Royal Veterinary College, put forward the following five-point programme:—

1. Need for improved methods in resting, fasting and care of animals awaiting slaughter.

2. Provision of adequate facilities for *ante-mortem* veterinary examination of animals awaiting slaughter and for the segregation and slaughter in isolation of animals showing clinical signs of disease or ill-health.

3. Provision not only for adequate laboratory facilities and staff—as essential aids to the scientific execution of meat inspection—but also facilities for prolonged detention of carcases pending the results of examination.

"To be successful," said Mr. Greatorex, "a vigorous research campaign should be instituted so as to reduce to a minimum the time required to determine the presence or otherwise of pathogenic organisms in detained meat."

4. The significance of lesions of tuberculosis in a carcase should be re-examined in the light of recent research on that disease.

5. Institution of a carefully planned system of co-operation between the meat inspector and the field veterinary officer would enable the findings observed in the abattoir to be used for purposes of controlling diseases of both man and animals.

The more negative aspect of meat inspection which concerned itself merely with the condemnation of diseased or unsound meat, without involving any steps to control disease at the farm, rendered the life of the meat inspector more than a little monotonous. In itself, it did nothing to stimulate or even sustain his interest in his work. "Collaboration, therefore, between the abattoir worker and the field worker would do much to relieve this monotony," argued Mr. Greatorex, "and the meat inspector who is able from his findings in the abattoir to initiate active measures to control animal disease at its origin has before him a real purpose."

Milk and Dairy Legislation

Mr. George Tullis, M.R.C.V.S., D.V.S.M., Divisional Veterinary Officer of the Ministry of Agriculture, dealt with recent milk and dairies legislation and the provision of a safe milk supply. Emphasising that he was speaking in a private capacity, Mr. Tullis said that legislation controlling the production of milk had concentrated in the past on hygiene methods and equipment rather than on the prevention of milk-borne disease. An outstanding example was the accredited herd. It was well known that many were composed entirely of cows that had failed to pass the tuberculin test. It was gratifying to find that under the new regulations the designation "accredited" would cease to exist in October, 1954.

Explaining the Milk and Dairies Regulations, 1949, Mr. Tullis said that it was already apparent that they had given marked impetus to the cleaning up of dairy herds in his own county, Somerset, where new licences to produce tuberculin-tested milk had been issued at the rate of 70 to 80 per cent. per month since October last, when they became operative.

One major criticism of the Regulations was their failure to provide a greater measure of control over the producer-retailer of non-designated milk. There was no provision for the sampling and testing and no standard of cleanliness was laid down for his milk.

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THEIR MAJESTIES AT MILL HILL

New Medical Research Centre Opened

On Saturday last the King, who was accompanied by the Queen, opened the new buildings of the National Institute for Medical Research at Mill Hill. A description of the Institute—the largest of its kind in the British Empire—and its functions appeared in our issue of April 27th.

The King was received at the Institute by Lord Latham, Lord Lieutenant of Middlesex, and Lord Addison, Lord Privy Seal and Chairman of the Medical Research Council. The inaugural ceremony was held in the Fletcher Memorial Hall, where an address of welcome was read.

Replying to the address, the King said: "This new building marks yet one more advance in man's fight against disease and in his struggle to bring a healthier and fuller life to each of us. The opening of this building is a great encouragement because it shows that, in spite of the serious setbacks of war, the search for new knowledge for the benefit of humanity persists, and by its enthusiasm surmounts all difficulties. The Medical Research Council, in providing this Centre, show that they are preparing for still greater efforts and progress in the future. This fine building, so admirably planned, provided with adequate and well designed accommodation and equipped with the most modern apparatus of scientific investigation, will greatly help the work of those whose devotion to the relief of suffering we all admire.

"Here they will be able to concentrate on their common task and enjoy that close association which is so productive of good results. The work of the Institute exemplifies that spirit which inspires the State and science to work together for the health and happiness of mankind. The results of this union are available to all without distinction of race, colour, or creed; and many families here at home and, indeed, throughout the world have reason to be grateful for the benefits which have been brought about by medical research. I congratulate the Institute on what it has already done and on the world-wide reputation for distinguished scientific work which it has long established. I am glad that you, Lord Addison, who were a member of the original Medical Research Committee in 1913, and are now once more intimately associated with the life of the Institute, should be here to see the completion of a great design in this new building.

"In declaring it open I pray that, with God's help, further blessings for mankind may be revealed here, and that the Institute may continue to prosper in its noble work."

Their Majesties, accompanied by Sir Charles Harington, Director of the Institute, then made a brief tour of different departments of the Institute.

The Seasonal and Species Distribution of Oestrogens in British Pasture Plants

The occurrence of oestrogens in plants was first observed by the Austrian workers, Loewe and Spohr, in 1926 and the animal sex hormones have since been demonstrated in plant material ranging from the bacteria to the flowering plants. The role of these substances in plants has not yet been fully explained, but that they may affect the reproductive system of the grazing animal and cause infertility has been demonstrated, as is now well known, in Australia by Bennetts and his collaborators (1944, 1946). These workers devised a method of extraction and assay which made quantitative tests on plant material possible (Robinson, 1949).

A preliminary examination which demonstrated the presence of oestrogens in English pasture has already been reported [Bartlett *et al.* (1948.) *Nature, Lond.* **162.** 845.] A more detailed investigation has since been in progress, conducted jointly by the National Institute for Research in Dairying, Shinfield, and the Courtauld Institute of Biochemistry, Middlesex Hospital, London, W.1. The results obtained during 1949 were reported to a meeting of the Biochemical Society held on January 21st last [Legg, J. P., Curnow, D. H., and Simpson, S. A. (1950.) *Biochem. J.* **46.** (*Proc. Biochem. Soc.*, xiv).]

The method of extraction and assay was essentially that of Robinson. The chemical nature of the oestrogen and the state in which it occurs in the plant are not yet known, and there is some doubt, it is said, as to the efficiency of the extraction.

From the results shown in a published table considerable oestrogenic activity was found both in grasses (Perennial Ryegrass S23, *Lolium perenne L.*, and H.I. Ryegrass, and Cockstoot S37, *Dactylis glomerata L.*) and clover (Red Clover, *Trifolium pratense*). Lucerne (*Medicago sativa L.*), White Clover (*Trifolium repens L.*) and Timothy Grass (*Phleum pratense L.*), however, showed little activity.

In each of the potent species, activity was found in all parts of the plant tested, *i.e.*, leaf, petiole, stem and inflorescence. There was considerable seasonal variation and the various plant organs did not show maximal concentrations simultaneously. It was also found that when chloroplasts were precipitated from the juice obtained by crushing plant material, the bulk of the oestrogen occurred in the precipitate.

The results indicated that oestrogens occur in British pasture plants in concentrations which vary with the species. The early occurrence in the leaf and the high concentration in chloroplasts suggest that this is the site of production.

Various workers referred to in the note have shown that application of oestrogens stimulates vegetative growth, but the findings listed in the note communicated by Legg, Curnow and Simpson suggest, according to them, that the high oestrogen concentration is associated with reproductive growth. Spring growth of grass, which is associated with high oestrogen concentration, precedes flowering, but when autumn growth takes place the plant is not in the reproductive phase. Broad Red Clover, on the other hand, which has repeated high concentrations of oestrogen, will produce flowers throughout the summer and autumn.

From the standpoint of the veterinarian, who has been at pains hitherto to explain the increased mammary activity and flush of milk which occurs in cows when turned out to fresh grass after their customary winter keep, the above findings, it need hardly be said, are not without significance. Indeed, as has been strongly suspected by a few observers including the present reviewer (*Proc. roy. Soc. Med.* 1942, **35,** 633.) for some time, the primary irritation of the mammary tissue leading to the establishment afterwards in it of some, at least, of the various micro-organisms that are associated with bovine mastitis may eventually be found to be linked with a phenomenon of the above sort. A close examination for any correlation between the rhythmic variations in oestrogenic activity in the pasture plants ingested and any well-defined rhythmic variations discovered to occur in the different kinds of mammary bacterial infection will doubtless throw some preliminary and much-needed light on the validity or otherwise of this view.

J. T. E.

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DUMFRIES AND GALLOWAY DIVISION DINNER-DANCE

Under the auspices of the Dumfries and Galloway Division of the N.V.M.A. a dinner-dance was held in the George Hotel, Penrith, on March 10th, 1950. It was a very successful function and the organisers, Mrs. Reid, Carlisle, and Mr. Barr, Penrith, are grateful to all those people who supported it. As a result, a donation of £6[3] has been made to the Victoria Veterinary Benevolent Fund.

ANOTHER GREAT RECORD BY GORDON RICHARDS

Hearing so much of the eclipse of the horse, it may not be sufficiently appreciated that racing practice remains of supreme importance to many members of the profession, and affairs of the Turf of moment to many more. Thus numerous readers will have shared the enthusiasm with which, at Sandown Park on May 4th, his admirers greeted the achievement of Gordon Richards in riding his 4,000th winner—a feat never approached by any other jockey.

Since he began riding 30 years ago, Gordon Richards has ridden in 18,478 races, and has been champion jockey 22 times in the last 25 years. He passed Fred Archer's 1886 record of 2,748 winners in 1943, and Sam Heapy's 1938 record of 3,000 in 1946, and as he is still comparatively young, as jockeys go, and is riding as well as ever, he can look forward to many further successes.

Richards holds the world record of riding 12 consecutive winners. He accomplished this feat in 1933. He rode the winners of all six races at Chepstow on October 4th, 1933. On the next day he rode the first five winners, and as he had won the last race on October 3rd, he completed a sequence of 12 successive victories. In addition he has ridden a sequence of eight winners once, seven winners once, six once, five 12 times, four 32 times, and three on 112 occasions.

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Tuberculosis (Attested Herds) Scheme

STATEMENT SHOWING POSITION IN EACH COUNTY AS AT MARCH 31ST, 1950

County	Total Cattle as at 3.6.49	Number of Attested Herds as at 31.3.50	Number of Cattle in Attested Herds as at 31.3.50	Percentage of Attested Cattle to Total Cattle
Bedford	46,479	107	5,850	12·6
Berks	84,174	487	25,740	30·6
Buckingham	113,472	346	18,240	16·1
Cambridge	31,593	101	5,340	16·9
Isle of Ely	21,202	29	1,380	6·5
Chester	247,492	655	29,330	11·9
Cornwall	275,770	505	17,530	6·4
Isles of Scilly	481	80	480*	100·0
Cumberland	224,496	1,586	71,980	32·1
Derby	186,246	331	16,480	8·9
Devon	414,027	839	33,120	8·0
Dorset	149,729	735	38,660	25·8
Durham	117,047	485	17,430	14·9
Essex	123,889	570	27,110	21·9
Gloucester	193,655	600	31,880	16·5
Hampshire	145,909	845	38,420	26·3
Isle of Wight	21,182	100	4,100	19·4
Hereford	141,535	346	16,280	11·5
Hertford	59,935	287	16,500	27·5
Huntingdon	28,875	40	2,450	8·5
Kent	120,250	469	22,280	18·5
Lancaster	278,129	917	34,910	12·6
Leicester	164,788	219	11,540	7·0
Lincoln (Holland)	27,596	3	40	·1
Lincoln (Kesteven)	69,263	46	1,950	2·8
Lincoln (Lindsey)	159,199	97	4,500	2·8
London	—	—	—	—
Middlesex	7,733	32	1,930	25·0
Norfolk	181,444	436	28,220	15·6
Northampton	154,023	155	9,340	5·8
Soke of Peterborough	6,917	155	9,340	5·8
Northumberland	205,438	333	17,990	8·8
Nottingham	108,927	153	6,660	6·1
Oxford	105,698	554	27,780	26·3
Rutland	19,842	15	810	4·1
Salop	282,699	574	33,270	11·8
Somerset	326,083	1,112	54,590	16·7
Stafford	238,355	391	13,730	5·8
Suffolk, East	80,934	229	10,960	13·5
Suffolk, West	38,473	161	9,130	23·7
Surrey	52,004	390	16,050	30·9
Sussex, East	108,009	457	18,060	16·7
Sussex, West	73,907	354	16,670	22·6
Warwick	151,148	293	15,130	10·0
Westmorland	96,904	1,346	53,350	55·1
Wilts	195,868	548	36,590	18·6
Worcester	102,638	199	9,920	9·7
Yorks, East Riding	135,277	84	3,020	2·2
Yorks, North Riding	250,022	796	28,060	11·2
Yorks, West Riding	341,247	1,203	40,150	11·8
ENGLAND	6,709,094	20,568	944,840	14·1
Anglesey	58,054	171	5,220	9·0
Brecon	49,223	171	6,030	12·3
Caernarvon	62,281	309	8,510	13·7
Cardigan	76,498	3,770	57,370	75·0
Carmarthen	137,205	5,062	95,770	69·8
Denbigh	104,813	636	17 070	16·3
Flint	62,045	137	5,740	9·3
Glamorgan	76,998	250	6,800	8·8
Merioneth	42,677	1,027	19,950	46·7
Monmouth	73,080	207	8,480	11·6
Montgomery	99,820	500	17,260	17·3
Pembroke	103,379	1,911	41,580	40·2
Radnor	39,308	53	1,490	3·8
WALES	985,381	14,204	291,270	29·6
ENGLAND & WALES	7,695,375	34,772	1,236,110	16·1

County	Total Cattle as at 3.6.49	Number of Attested Herds as at 31.3.50	Number of Cattle in Attested Herds as at 31.3.50	Percentage of Attested Cattle to Total Cattle
Aberdeen	224,228	207	18,510	8·3
Angus	66,445	112	11,740	17·7
Argyll	62 415	591	20,800	33·3
Ayr	150,861	2,192	135,790	90·0
Banff	54,644	52	3,780	6·9
Berwick	34,582	57	3,750	10·8
Bute	10,509	325	9,500	90·4
Caithness	26,749	149	3,870	14·5
Clackmannan	4,647	30	1,970	42·5
Dumfries	102,204	1,429	77,340	75·7
Dunbarton	16,608	238	12,110	72·9
East Lothian	16,065	49	3,560	22·1
Fife	62,843	314	21,580	34·3
Inverness	52,346	74	4,030	7·7
Kincardine	37,742	57	4,720	12·5
Kinross	8,891	48	3,230	36·3
Kirkcudbright	73,438	818	54,230	73·8
Lanark	92,892	1,286	71,260	76·7
Midlothian	24,637	205	10,810	43·9
Moray	29,306	49	3,980	13·6
Nairn	8,035	19	1,420	17·6
Orkney	48,598	110	3,600	7·4
Peebles	11,475	171	7,090	61·8
Perth	91,755	246	16,020	17·4
Renfrew	30,721	405	21,400	69·7
Ross-shire	39,618	41	2,380	6·0
Roxburgh	34,948	63	3,930	11·2
Selkirk	6,117	51	1,510	24·7
Stirling	40,645	392	20,280	49·9
Sutherland	9,878	83	720	7·3
West Lothian	15,281	131	6,930	45·4
Wigtown	71,953	625	50,800	70·6
Zetland	7,494	1,908	6,430*	100·0
Scotland ..	1,568,570	12,527	619,070	39·5
Great Britain	9,263,945	47,299	1,855,190	20·0

* All cattle herds in Zetland and Isles of Scilly are attested. This figure represents the number of animals in the last test of the herds.

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SCOTLAND'S LEAD IN TUBERCLE-FREE CATTLE

Scotland retains her pronounced lead in the proportion of her cattle stocks that are now attested as free from bovine tuberculosis. Whereas the proportion of attested stock in England is 14·1 per cent., and in Wales is 29·6 per cent., the figure for Scotland is now 39·5 per cent.

Out of the total Scottish cattle population of 1,568,570 there are 12,527 attested herds comprising 619,070 head of stock. Ayr is the most outstanding county in Great Britain with 90 per cent. of her large cattle population of 150,861 head in attested herds. Bute has over 90 per cent. and Arran is now fast approaching 100 per cent. as part of that county.

The Government have fixed October 1st as the date for taking further steps towards the eradication of reacting stock from areas to be prescribed for special action. The West and South-West of Scotland are the most "ripe" areas.

In recording these figures, the *Glasgow Herald* adds that Mr. William Grant, divisional inspector of the Ministry of Agriculture and Fisheries, in a report on the animal health in Stirlingshire submitted to the County Council at Stirling, said that the day was not far distant when tuberculosis would be completely eradicated from dairy herds. On October 1st, 1950, the eradication programme would include the beef herds, and it was hoped that soon after that date areas would be set up for the complete eradication of tuberculosis.

Captain William Watt, Superintending Inspector of the Ministry of Agriculture and Fisheries, in his report on the subject of the eradication of tuberculosis, stated that owners would have an adequate opportunity of clearing up voluntarily before compulsion was employed. The present position in the West of Scotland was that 40 per cent.—600,000—of the total cattle population of Scotland —1,500,000—were located in eleven counties in the South-West of Scotland. Of these 600,000 cattle, over 450,000 were now in attested herds, and of the remaining 150,000 it was estimated that about half were in "beef" herds.

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NATIONAL MILK RECORDS

According to the annual report of National Milk Records, the number of recorded herds has increased to four times the pre-war level. The 1948-49 figure was 19,218 compared with 18,337 the previous year. The report stresses that a good margin of performance is to be expected from recorded herds as they are the source of good breeding stock for our national herds.

The yield average has risen from 7,340 lb. to 7,986 lb. and the average butterfat from 3·75 per cent. to 3·79 per cent.

Composite sampling, says the report, was introduced on a voluntary basis in the summer months of 1949 and during the last month of voluntary operation 90 per cent. of the membership were using the composite sample. For the year as a whole the composite sampling enabled a 20 per cent. increase in the number of cows tested with almost no increase in the amount of work in laboratories. In the year 1949 to 1950 the full effect will be felt.

It was now felt that the butterfat testing service can confidently meet the demands likely to be made upon it.

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HEAT TREATMENT OF MILK

In recording the review of the progress of heat treatment in milk given by Mr. A. Rowlands, National Institute for Research in Dairying, to the Society of Dairy Technology in London, the *Farmers' Weekly* reports that Mr. Rowlands said that there was a need for more information on time and temperature limits for heat treatment in the higher temperature ranges. He was quite convinced that the safety margin allowed in commercial plant was adequate. Some of the tolerances, however, might be unnecessarily generous. The dairying industry, said Mr. Rowlands, had a tremendous responsibility. Although heat treatment destroyed bacteria there was still the risk of subsequent re-infection of pasteurised milk.

The discussion was opened by Dr. A. L. Provan, Chief Chemist, Milk Marketing Board. The elimination of bovine tuberculosis, he said, was an expressed policy of the Government and producers. But if this were achieved, even in the near future, the need for pasteurisation would still exist on grounds of keeping quality as long as there were large consuming areas dependent on far distant producing areas. The souring of pasteurised milk, he continued, appeared to be influenced mainly by contamination from unsterile plant surfaces during cooling and bottling. "The importance of this fact is not fully realised and, until it is, we are ignorant of the whole basis of modern methods of plant control."

Dr. Provan then spoke of the problem of broken cream, which was a serious one for the industry as the consumer considered that the milk was sour. He asked if any work had been done on chemical sterilisation and washing the cows' udders with hypochlorate. Another point which was going to become of increasing importance was that of the pasteurisation of cream. Many dairies might commence pasteurising cream within the next year or so and would require a knowledge of the methods required to destroy bacteria which could cause spoilage.

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LEGAL NOTES

Alleged Traffic in Wild Birds.—Thirty-five summonses against 18 defendants concerning alleged traffic in wild birds were heard in the Thames Magistrates' Court recently. The defendants, who all pleaded Not Guilty, were said to have confined goldfinches, chaffinches, and a canary mule in cages which did not permit them to stretch their wings, to have possessed wild birds recently caught, and to have sold two goldfinches.

Mr. Gordon Jones, prosecuting for the R.S.P.C.A., said (states *The Times* report of the proceedings) that traffic in wild birds had increased enormously since the war. "Bird catchers are taking birds from the countryside in large numbers and selling them to dealers and others, who train them for singing," he said. "The extent of the trade is not only a source of some anxiety to bird lovers but, I am instructed, to the Ministry of Agriculture, on account of the economic value of wild birds to farmers."

Mr. Jones said that on March 19th several officers of the R.S.P.C.A. went to the Crown public house, Redchurch Street, Bethnal Green, and found 100 to 200 men with a large number of wild birds in very small cages. It was alleged that these birds were recently taken.

At the request of Mr. Ramage, for the defendants, evidence was given first in the case of Horace Victor Parsons, a master builder, of Goldsmith Avenue, Manor Park, who was summoned for confining two goldfinches and a linnet in small cages.

Inspector Syrett said he saw Parsons bring the birds into an upper room of the Crown in cages measuring 7 by 7¼ by 4¼ inches. The witness saw no sign of any competition or exhibition. Parsons, in evidence, said he had been a bird fancier for 32 years. He kept his birds in large aviaries at home and only used the small cages to take them to the Crown. They were there about two hours.

Another defendant, giving evidence for Parsons, said that the Crown had been used for 50 years by bird fanciers.

In dismissing the summons against Parsons, the Magistrate (Col. W. E. Batt) said the summonses had nothing to do with cruelty in catching birds. There was a proviso in the Protection

of Birds Act, 1925, which entitled persons to have birds in small cages for the purpose of public exhibition or competition. It had been sworn that for a number of years bird fanciers had gone on Sunday mornings to an upstairs room at the Crown, where there were hooks on which to hang the cages, to look at each other's birds and hear them sing. This, in his opinion, was an exhibition, without the shadow of a doubt. A number of other summonses of a similar nature was adjourned until May 31st. Mr. Jones said that he would consider the question of an appeal. If there was to be no appeal, other summonses would be withdrawn.

The magistrate also dismissed a summons against Charles G. Bull, boxing trainer, of Tytherton Road, Upper Holloway, for possessing a wild bird—a goldfinch alleged to have been recently taken.

Three summonses against Joseph W. Porter, a poultry fancier, of Fulham Palace Road, W., who was alleged to have sold two goldfinches to another man in the public house, were also dismissed.

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NEW MEDICAL JOURNALS

A new quarterly periodical is to be published by the British Medical Association. The provisional title is *Medical and Biological Illustration*. When the proposal was approved at the April meeting of the Council of the B.M.A., it was stated that 300 hospitals or medical schools employed one or more full-time photographers, that there were 250 medical members of the Royal Photographic Society, and about 200 medical artists. This was a work of growing importance and would be of great value, and the Association would be pioneers in a branch of education at present in its infancy. The B.M.A. is also to publish a popular health journal, and the first number will appear in January, 1951.

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The *British Medical Journal* (April 14th, p. 917) states that the only poisonous snake in Great Britain, *Vipera berus*, is relatively harmless. The treatment usually recommended for bites is application of a ligature proximal to the wound and enlargement of the wound, followed by sucking or irrigation. Fluids which may be used for irrigation are calcium chloride (1 in 60) or sodium hypochlorite (1 in 500).

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

TUBERCULOSIS OF THE UDDER

Sir,—It is gratifying to read again an article devoted to tuberculosis of the udder and it is hoped it will stimulate discussion. I would like to comment on several aspects. These, for convenience, will be taken *seriatim* with the text of the paper.

Firstly, in connection with the service of Form A a competent microscopist (and many LVO's come in this category) will seldom be in doubt on this point as the microscopic appearance of the cellular deposit generally indicates clearly the cause of the induration. Furthermore, inspection of the centrifuged milk will show in uncomplicated tuberculosis of the udder that the amount of cream is normal except in very advanced cases, whilst in mastitis it is reduced—as I have indicated elsewhere. (*Vet. Rec.* 1944. **45.** 422).

I realise that the authors are largely discussing the clinical aspect but it is only when one's clinical diagnoses have been checked by constant microscopic and biological examinations that competence in diagnosis develops. If there is a single feature which is diagnostic of tuberculosis of the udder it is the density of the induration, but in many cases the first sign is slight enlargement of the affected quarter. This can only be detected by comparison of the suspected with its other paired quarter, *i.e.*, hind with hind, and fore with fore quarter. In order to do this efficiently the examination of the udder *must* be made from behind the cow otherwise the nearer quarter always feels the larger.

From the posterior position the examiner is also better able to compare the weights of the paired quarters—a feeling of increased weight in a quarter should arouse suspicion.

On this matter of the examiner's position in examining the udders of cows, I disagree categorically with Messrs. Weir and Barbour, as the adoption of the lateral position leads to reduced efficiency, and the posterior is generally suitable for all but the elderly.

It is stated "it is generally believed that tuberculosis in the hind quarter commences in the postero-superior aspect" and if their statement is true then it implies general unfamiliarity with the disease and also the literature, as Torrance (*Vet. Rec.* 1937. **12.** (N.S.), 874), and Steward (*Vet. Rec.* 1944. **56.** 50) have demonstrated that the disease process commences around the base of the teat.

In discussing the supramammary lymphatic glands the authors state "the presence of a gland in which definite indurated nodules can be felt is diagnostic of this disease," *i.e.*, presumably tuberculosis of the udder. It can definitely be stated that gross tuberculosis of the supramammary glands occurs without disease of the udder—the infection of the gland having been haematogenous and in some cases probably congenital. I have had from six to eight cases in which there was gross tuberculous infection of the supermammary lymph gland in which the milk was negative to the biological test for tubercle bacilli. Some of these remained negative for prolonged periods. These cases in the absence of cough or emaciation are not eligible for slaughter under the Tuberculosis Order. Torrance (*loc. cit.*) again has published to the same effect and also Stamp, J. (*Vet. Rec.* 1944. **56.** 943).

In general, tuberculosis of the udder does not give rise to recognisable caseous lesions in the lymphatic gland unless it has been in existence for a considerable time, but as the authors state, there is often enlargement of the lymphatic gland associated with a tuberculous hind quarter.

Tuberculosis of a supernumerary quarter is not mentioned by the present authors, but all such quarters should be sampled when indurated. I have had several cases in which tuberculosis in the udder was confined to a supernumerary quarter, in one of which the secretion was purulent.

In conclusion, I would add that I agree fully with the description of the disease process in the udder, etc., but may I add an expression of the hope that we may be afforded the opportunity of perusing similarly, through the courtesy of the Editors, other valuable papers that may be published in the same journal (*The Mate Veterinary Journal*) which is restricted to a small section of the profession.

Yours faithfully,

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PANTING IN CATTLE

Sir,—There are several points in Col. Stewart's letter on the above subject appearing in your issue of May 6th, 1950, which interest me.

In the first place I can confirm that this condition is almost, if not quite, unknown amongst the indigenous cattle of India, although they are, of course, subject to periodic attacks with the foot-and-mouth disease virus.

Secondly, I thought it was well-known that for some years past the Australian veterinary authorities, headed by Dr. R. B. Kelley, have been following the example of workers in Texas, Mexico and other parts of the American continent, and experimenting with European × Zebu cattle for use in Northern Australia. I have no direct information in regard to the present cattle breeding scheme for the British Government in Queensland, but I understand that Dr. Kelley has recently visited India and Pakistan and purchased Zebu cattle there, for export to Australia.

Lastly, it has always seemed strange to me that when this subject of panting in cattle is being discussed, its similarity with the well-known condition of non-sweating in horses of which Col. Stewart must have had much experience, is not mentioned. In their external manifestations the two conditions are very similar. The condition in horses, which is confined to imported animals, might well be described as "panting," and to judge by the appearance of their coats, panting cattle might be equally well-described as "non-sweaters." I make the suggestion that in any future investigations undertaken on this subject, if they can be carried out in these two classes of animals, side by side, quicker results may be obtained.

Yours faithfully,

Frank Ware

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May 7th, 1950.